



ADMISSION TO DOCTORAL STUDIES
September 2022

Session

Field of doctoral studies: Mechanical Engineering
Doctoral supervisor: Prof. dr. eng. Sorin Vlase

TOPICS FOR THE ADMISSION TO DOCTORAL STUDIES

TOPIC 1: Vibration of an inertial platform with a huge mass
Content / Main aspects to be considered: <i>The analysis of the antropogenetic and due to the earthquakes of the 54.000 tons platform at Magurele-Bucharest, build for the Laser ELI-NP facility</i>
Recommended bibliography: 1. Valcovici si altii, Mecanica Teoretica, Ed. Did. Si Ped., Bucuresti 2. Buzdugan si altii, Vibratii mecanice, Ed. Did. Si Ped., Bucuresti
Prerequisites / Remarks: - <i>Not applicable</i>

TEMA 2: Analysis of the structure of the electrical vehicles
Content / Main aspects to be considered: - Calculus of some structures of the electrical vehicle taking into account their specifities
Recommended bibliography: 1. Valcovici et al, Mecanica Teoretica, Ed. Did. Si Ped., Bucuresti 2. Buzdugan et al, Vibratii mecanice, Ed. Did. Si Ped., Bucuresti 3. Zienkiewicz, Finite Element Method, 2010
Prerequisites / Remarks: - <i>Not applicable</i>

TEMA 3: Metoda Gibbs-Appel aplicata pentru analiza cu elemente finite a structurilor elastice ale automobilelor
Content / Main aspects to be considered: - It is applied the Gibbs-Appel's method to the analysis of some componetes of a

vehicle, using finite element method. With real world examples.

Recommended bibliography:

1.Valcovici et al, Mecanica Teoretica, Ed. Did. Si Ped., Bucuresti

2.Buzdugan et al, Vibratii mecanice, Ed. Did. Si Ped., Bucuresti

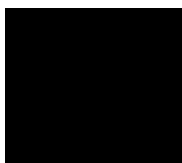
3.Zienkiewici, Finite Element Method,2010

Prerequisites / Remarks:

Not applicable

Doctoral supervisor,

Prof.dr.ing. S. Vlase



Coordinator of the
field of doctoral studies,

Prof.dr.ing. S. Vlase

